



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/522,044

01/19/2005

Peter Drott

PCT10483US

3988

23122 7590 01/24/2007  
RATNERPRESTIA  
P O BOX 980  
VALLEY FORGE, PA 19482-0980

EXAMINER

LEE, GILBERT Y

ART UNIT

PAPER NUMBER

3673

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

01/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/522,044

Applicant(s)

DROTT ET AL.

Examiner

Gilbert Y. Lee

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Examiner's Attachment A.

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/18/06 has been entered.

### ***Drawings***

2. The drawings are objected to because the radial apertures are not shown in detail. It is noted that the aperture is labeled as 8 in Fig. 1, however, it is unclear as to how 8 corresponds to the extension because it is off center. It is also unclear as to where the extension ends because the aperture labeled as 8 is off-centered from the extension, applicant is required to provide a figure that shows the extension being longer than one lip and shorter than another lip with a single radial aperture. It is also unclear as to what the extra line connecting the outside lip 4 and the aperture 8 in Fig. 1 is for, the line must be identified in the specification and drawings or the line must be removed from Fig. 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The

Art Unit: 3673

figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The amendment filed 12/18/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: on page 3 in the amendment filed 12/18/06 in the Brief Description of the Drawings, the descriptions of figures 2 and 3 and newly added Figures 2 and 3.

Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 3673

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 21 claims small and large apertures whereas the original disclosure only discloses apertures on page 6, line 24 and Fig. 1 only shows one sized aperture.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 15-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 15, 16 and 24 claim that the extension axially extends beyond the free ends of the first and second sealing lips. It is unclear to the examiner as to where the extension ends because Fig. 1 does not clearly depict what is claimed because the aperture 8 is off-centered from the extension and the line drawn from lip 4 to the aperture 8 is still unknown.

Claim 15 clearly claims the combination of a cylinder-and-piston unit in line 1, however, it is unclear to the examiner as to how the subcombination of the sealing collar

Art Unit: 3673

is "being configured for insertion" in line 2. The applicant is required to change "being configured for insertion" with --inserted--.

Claim 16 clearly claims the combination of a cylinder-and-piston unit in line 1; however, it is unclear to the examiner as to how the subcombination of the sealing collar is "being received" in line 2. The applicant is required to change "being received" with --received--.

Claim 24 clearly claims the combination of a cylinder-and-piston unit in line 1; however, it is unclear to the examiner as to how the subcombination of the sealing collar is "being received" in line 2. The applicant is required to change "being received" with --received--.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**For reference characters A-F refer to the Examiner's Attachment A.**

6. Claims 15-20 and 22-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Zollner (US Patent No. 4,602,791).

Regarding claim 15, the Zollner reference, as best understood, discloses a cylinder-and-piston unit (Col. 1, Lines 5-15) comprising a cylinder (5), a piston (6) and a sealing collar (19 or 22), the sealing collar inserted into a groove (e.g. groove of element

Art Unit: 3673

5 containing elements 19 and 21 or elements 21 and 22) extending into the cylinder (Fig. 2), and comprising an outside sealing lip (B) and an inside sealing lip (A), the outside and inside sealing lips each having a free end (i.e. the ends facing downwards in Fig. 2), the sealing collar further including a circumferential extension (C) that extends in parallel to the sealing lips (Fig. 2), is arranged radially between the outside sealing lip and the inside sealing lip and projects axially beyond the free ends of the outside and inside sealing lips (Fig. 2), the circumferential extension being configured to contact a side wall (e.g. wall of element E in contact with element 19 or wall of element ~~21~~<sup>E</sup> in contact with element 22) in the groove (Fig. 2) and maintain the free ends of the outside and inside sealing lips out of contact with the sidewall (Fig. 2).

OK, VP  
1/19/07

Regarding claim 16, the Zollner reference, as best understood, discloses a cylinder-and-piston unit (Col. 1, Lines 5-15) comprising a cylinder (5), a piston (6) and a sealing collar (19 or 22), the sealing collar received in a groove (e.g. groove of elements 5 and E containing elements 19 and 21 or groove made by elements 5, 21 and D containing element 22) that is recessed in an interior wall surface (i.e. surface of element 5 in contact with B) of the cylinder, the sealing collar comprising a first sealing lip (A) and a second sealing lip (B), the first sealing lip being acted upon dynamically and making contact with the piston (Fig. 2) and the second sealing lip thereof being acted upon statically while resting on a bottom of the groove (Fig. 2), the first and second sealing lips each having a free end (i.e. the ends facing downwards in Fig. 2), the sealing collar further including a circumferential extension (C) that extends between the first and second sealing lips (Fig. 2), and projects from the first and second sealing

Art Unit: 3673

lips in an axial direction beyond the free ends of the first and second sealing lips (Fig. 2), the sealing collar having a rear surface (e.g. surface of elements 19 or 22 in contact with elements 21 or D respectively) opposite the free ends of the first and second sealing lips, wherein the sealing collar has a maximum radial width at the free end of the second sealing lip and a minimum radial width at the rear surface (Fig. 2). Note that the radial width at the rear surface will always be smaller than the maximum width because of supporting ring 1.

Regarding claim 17, the Zollner reference, as best understood, discloses the axial width of the groove (e.g. groove of elements 5 and E containing elements 19 and 21 or groove made by elements 5, 21 and D containing element 22) being larger than the axial width of the sealing collar (i.e. from the rear surface of element 19 or 22 to the tip of the extension C in contact with E and 21 respectively).

Regarding claim 18, the Zollner reference, as best understood, discloses the second sealing lip (B). Note that the second lip of the Zollner reference is capable of being passed over by pressure fluid flow and hence provide the effect of a valve, because the structure as claimed in claim 16 is the same as the structure of the Zollner reference.

Regarding claim 19, the Zollner reference, as best understood, discloses the strength of the extension as a difference between its inside and outside diameters has at least the same rate as the strength of each of the sealing lips. Note that the seal of the Zollner reference is made of one material and since the extension has a thicker diameter, it will have a strength that is equal, if not greater, than the strength of the lips.



Regarding claim 20, the Zollner reference, as best understood, discloses the extension being provided with radial apertures (F). Note that the apertures are capable of allowing pressure fluid to pass through in a radial direction.

Regarding claim 22, the Zollner reference, as best understood, discloses the apertures being open in an axial direction towards the free end of the extension (Fig. 2).

Regarding claim 23, the Zollner reference, as best understood, discloses the extension being integrally connected to the sealing collar and being made of the same material (Fig. 2).

Regarding claim 24, the Zollner reference, as best understood, discloses a cylinder-and-piston unit (Col. 1, Lines 5-15) comprising a cylinder (5), a piston (6) and a sealing collar (19 or 22), the sealing collar received in a groove (e.g. groove of element 5 containing elements 19 and 21 or elements 21 and 22) that is recessed in an interior wall surface (i.e. surface of element 5 in contact with B) of the cylinder, the sealing collar comprising an outside sealing lip (B) and an inside sealing lip (A), the outside and inside sealing lips each having a free end (i.e. the ends facing downwards in Fig. 2), the sealing collar further including a circumferential extension (C) that extends in parallel to the sealing lips (Fig. 2), is arranged radially between the outside sealing lip and the inside sealing lip and has a free end that projects axially beyond the free ends of the outside and inside sealing lips (Fig. 2), the circumferential extension engaging a side wall (e.g. wall of element E in contact with element 19 or wall of element ~~21~~<sup>E</sup> in contact with element 22) in the groove (Fig. 2) and maintaining the free ends of the outside and inside sealing lips out of contact with the sidewall (Fig. 2).

VP, 1/14/07

Regarding claim 25, the Zollner reference, as best understood, discloses the free end of the circumferential extension being provided with radial apertures (F). Note that the apertures are capable of allowing pressure fluid to pass through in a radial direction.

Regarding claim 26, the Zollner reference, as best understood, discloses the sealing collar having a rear surface (e.g. surface of element 19 or 22 in contact with element 1 that is parallel to the surface of element C in contact with element E or 21, respectively) opposite the free ends of the outside and inside sealing lips, wherein the sealing collar has a maximum outside diameter at the free end of the outside sealing lip and a minimum outside diameter at the rear surface (Fig. 2). Note the minimum outside diameter is the same width as the supporting ring 1 and will always be smaller than the maximum diameter at the outside seal.

VP, 1/19/07

#### ***Allowable Subject Matter***

7. Claim 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

8. With regards to the applicant's arguments of the drawing objections, the arguments are not persuasive. Although the label 8 is described as an aperture, the Figure shows an addition on top of the extension 6 that is behind the section at which

Art Unit: 3673

the drawing is taken. The applicant argues that Fig. 1 depicts a circular geometry, and the line connecting outer lip 4 to the aperture 8 might be considered to be depicting a circular geometry for the outer lip 4, however it is unclear to the examiner as to whether this statement is true because there is no circular geometry depicted for extension 6.

9. With regards to the applicant's argument of claim 15, the argument is not persuasive because claim 15 was rejected by the Zollner reference in the final office action dated 10/30/2006 on pages 5 and 6.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gilbert Y. Lee whose telephone number is 571-272-5894. The examiner can normally be reached on 8:00 - 4:30, M-F.

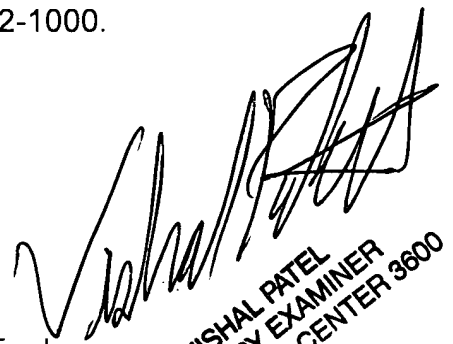
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia L. Engle can be reached on (571)272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3673

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GL  
January 17, 2007

For Patricia Engle  
Supervisory Examiner  
Tech. Center 3600



VISHAL PATEL  
PRIMARY EXAMINER  
TECHNOLOGY CENTER 3600

U.S. Patent    Jul. 29, 1986    Sheet 3 of 6    4,602,791

4,602,791

